

TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2019-08-30-107 Date: 18-07-19

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Construction of Compound Wall at Samudhayabhavana GKV Layout in Ward No:04.

Agency : Sri.R.Ranganath, No:37, 19th Cross, 1st N Block, Rajajinagara, Bangalore-10.

Customer Reference : EE(YNK.D)E-PMT-09/W.O/73/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 16-07-19

Sample Type/ Size : 20mm down size coarse aggregate

Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties

Date of test : 16-07-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	185	185	3.7	96.3	90-100
3	10 mm	2217	2402	48.0	52.0	25-55
4	4.75 mm	2344	4746	94.9	5.1	0-10
5	Pan	254	5000	100	0	-

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ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106





TEST REPORT ON COARSE AGGREGATES

Lab ID

:

CP-2019-08-30-107

Date: 18-07-19

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.1	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	13.5	
3	Specific Gravity	2.62	—
4	Bulk Density(Loose) (Kg/l)	1.48	—
5	Bulk Density(Compacted) (Kg/l)	1.52	—
6	Water Absorption(%)	0.23	—
7	Aggregate crushing Value(%)	23.4	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	22.8	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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Samples will be disposed after 90 days from the date of issue of test certificate

FOR CIVIL Pro.

R. Rudraprasad

R RUDRAPRASAD
Authorized Signatory
Technical Manager



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End of Report

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TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2019-08-30-107 Date: 18-07-19

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Construction of Compound Wall at Samudhayabhavana GKVK Layout in Ward No:04.

Agency : Sri.R.Ranganath, No:37, 19th Cross, 1st N Block, Rajajinagara, Bangalore-10.

Customer's Reference : EE(YNK.D)E-PMT-09/W.O/73/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 16-07-19

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption

Date of test : 16-07-19

Total weight taken : 1000 grams

SL.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result : The tested Sample Conforms to Grading Zone II



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TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

Lab ID : CP-2019-08-30-107 Date: 23-07-19

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Construction of Compound Wall at Samudhayabhavana GKVK Layout in Ward No.04.

Agency : Sri.R.Ranganath, No:37, 19th Cross, 1st N Block, Rajajinagara, Bangalore-10.

Customer's Reference : EE(YNK.D)E-PMT-09/W.O/73/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 20-07-19

Sample Type/Size : Solid concrete blocks size (400X200X200)mm

Reference to BIS codes : IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification
Part I: Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex - C Clause 9.3 and 10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)

Date of test : 20-07-19

BLOCK DENSITY:

SL No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10 ⁶	Avg. Block Density in (Kg/cum)	As per IS 2185(Part 1) :2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm ³)	Kg	Kg/m ³	Kg/m ³	
1	400	198	202	15998	33.926	2120.6	2042.5	Not less than 1800Kg/m ³
2	405	203	203	16690	32.550	1950.3		
3	405	198	201	16118	33.148	2056.5		

WATER ABSORPTION:

SL No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg. Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.91	32.25	4.89	4.25	Shall not be more than 10% by mass
2	33.57	32.14	4.28		
3	33.44	32.24	3.59		

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Lab ID

: CP-2019-08-30-107

Date: 23-07-19

COMPRESSIVE STRENGTH:

SL No.	Size of solid block		Area	Failure Load	Compressive strength	Average Compressive strength
	Length	Breadth				
	mm	mm	(mm ²)	(KN)	N/mm ²	(N/mm ²)
1	400	203	80938	352.2	4.4	4.7
2	401	200	80090	385.4	4.8	
3	401	203	81395	382.6	4.7	
4	402	200	80410	385.2	4.8	
5	400	200	79895	385.9	4.8	
6	401	200	80229	389.6	4.9	
7	403	201	80854	388.1	4.8	
8	401	201	80637	368.2	4.6	

As per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)

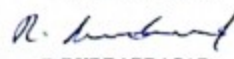
Compressive strength		
Grade	Minimum average	Minimum Individual units.
C (5.0)	5.00 N/mm ²	4.00 N/mm ²
C (4.0)	4.00 N/mm ²	3.20 N/mm ²

Note:

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R RUDRAPRASAD
 Authorized Signatory
 Technical Manager



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 *****End of Report*****



TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2019-08-30-107 Date: 31/07/2019

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Construction of Compound Wall at Samudhayabhavana GKVK Layout in Ward No:04.

Agency : Sri.R.Ranganath, No:37, 19th Cross, 1st N Block, Rajajinagara, Bangalore-10.

Customer's Reference : EE(YNK.D)E-PMT-09/W.O/73/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-07-19

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete C15

Date of test : 31/07/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Concrete	M20	24/07/2019	31/07/2019	151.19 X	22802	8.489	420.3	18.4	18.3
					150.82 X					
					151.68					
2	Drain Concrete	M20	24/07/2019	31/07/2019	151.94 X	22873	8.593	420.3	18.4	
					150.54 X					
					149.50					
3	Drain Concrete	M20	24/07/2019	31/07/2019	151.20 X	22845	8.990	413.9	18.1	
					151.10 X					
					149.46					

Note:

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 ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106



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 R. Rudraprasad
 Authorized Signatory
 Technical Manager



TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2019-08-30-107 Date: 21/08/2019

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Construction of Compound Wall at Samudhayabhavana GKVK Layout in Ward No:04.

Agency : Sri.R.Ranganath, No:37, 19th Cross, 1st N Block, Rajajinagara, Bangalore-10.

Customer's Reference : EE(YNK.D)E-PMT-09/W.O/73/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-07-19

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 21/08/2019

Date of test : 21/08/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Concrete	M20	24/07/2019	21/08/2019	149.22 X	22619	8.297	535.6	23.7	23.4
					151.59 X					
					149.11					
2	Drain Concrete	M20	24/07/2019	21/08/2019	150.61 X	22529	8.549	509.6	22.6	
					149.59 X					
					149.19					
3	Drain Concrete	M20	24/07/2019	21/08/2019	149.97 X	22565	8.534	537.7	23.8	
					150.46 X					
					150.37					

Note:

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R. Rudraprasad

R. RUDRAPRASAD

Authorized Signatory

Technical Manager





Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2019-08-30-107 Date: 19-07-19
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Construction of Compound Wall at Samudhayabhavana GKVK Layout in Ward No.04.
Agency : Sri R. Ranganath, No.37, 19th Cross, 1st N Block, Rajajinagara, Bangalore-10.
Customer's Reference : EE(YNK.D)E-PMT-09/W.O/73/2019-20
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 16-07-19
Sample Type : Birla Super 53grade
Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5, Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11, DETERMINATION OF DENSITY , Clause 6

Date of test : 17-07-19

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

SLNo.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.53	—
2	Finess by Air permeability method (m ² /kg, Min)	298.3	225m ² /kg, Min
3	Density (gm/cc)	3.13	—
4	Standard Consistency (%)	29.5%	Not specified
5	Initial Setting time	165 minutes	Not less than 30 minutes
6	Final Setting time	250 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

Note:

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Technical Manager

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****End of Report****

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2019-08-30-107 Date: 19-07-19
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Construction of Compound Wall at Samudhayabhavana GKVK Layout in Ward No:04.
Agency : Sri.R.Ranganath, No:37, 19th Cross, 1st N Block, Rajajinagara, Bangalore-10.
Customer's Reference : EE(YNK.D)E-PMT-09/W.O/73/2019-20
Source of Sample : Sample supplied by Agency
Sample condition : Satisfactory
Date of Receipt : 16-07-19
Sample Type : 40mm down size coarse aggregate
Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties
Date of test : 16-07-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	354	354	2.4	97.6	90-100
3	20 mm	7149	7503	50.0	50.0	30-70
4	10 mm	4526	12029	80.2	19.8	10-35
5	4.75 mm	2388	14417	96.1	3.9	0-5
6	Pass	583	15000	100.0	0	---

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL
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TEST REPORT ON COARSE AGGREGATES

Lab ID

: CP-2019-08-30-107

Date: 19-07-19

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	9.1	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.5	
3	Specific Gravity	2.64	—
4	Bulk Density(Loose) (Kg/l)	1.48	—
5	Bulk Density(Compacted) (Kg/l)	1.52	—
6	Water Absorption(%)	0.18	—

Note:

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